

Informal employment in high-income countries for a health inequalities research: a scoping review

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ABSTRACT

BACKGROUND: Informal employment (IE) is one of the least studied employment conditions in public health research, mainly due to the difficulty of its conceptualization and its measurement, producing a lack of a unique concept and a common method of measurement.

OBJECTIVE: The aim of this review is to identify literature on IE in order to improve its definition and methods of measurement, with special attention given to high-income countries, to be able to study the possible impact on health inequalities within and between countries.

METHODS: A scoping review of definitions and methods of measurement of IE was conducted reviewing relevant databases and grey literature and analyzing selected articles.

RESULTS: We found a wide spectrum of terms for describing IE as well as definitions and methods of measurement. We provide a definition of IE to be used in health inequalities research in high-income countries. Direct methods such as surveys can capture more information about workers and firms in order to estimate IE.

CONCLUSIONS: These results can be used in further investigations about the impacts of this IE on health inequalities. Public health research must improve monitoring and analysis of IE in order to know the impacts of this employment condition on health inequalities.

Keywords: informal sector, high-income populations, public health, health equity, employment conditions.

1. Introduction

Work is an important social determinant in people's lives. The particular conditions or circumstances under which a person performs his or her work or occupation have been defined as "employment conditions", implying the existence of an agreement or relationship between an employer and an employee (1). Working conditions involve exposures in the workplace (physical, chemical, biological and ergonomic), and the way work is organised (including the psychosocial environment, power relations between workers and employers and worker's participation, among other factors). The WHO Employment Conditions Network (EMCONET) report, a state of the art overview of this research area, identified six main employment conditions: stable full-time work, unemployment, precarious employment, child labour, slavery and bonded labour, and informal employment (2,3). The one latter employment condition will be the focus of our paper because we are interested to study how we can define and measure it related to health inequalities.

Informal employment is one of the least studied employment conditions in public health research, mainly due to the difficulty of its conceptualization and its measurement (4–7), producing a lack of a unique concept and a common method of measurement. Also due to the lack of existing official data (8–10), even in high-income regions, and its illegal nature in many jurisdictions (11) (according to the World Bank, high-income countries are those with a 2011 GNI over US\$12,476) (12).

Informal employment is a very complex and multidimensional phenomenon typically characterized by lack of labour legislation, taxation, social protection, or entitlement to employment benefits. Since the first conceptualization of the informal sector by Hart (4), the different schools and theories of the informal economy, and the definitions of the informal economy and informal employment developed by the International Labour Organization (13), all highlight the lack of a unique concept and that informal employment is a complex

phenomenon (14). Not only are there different types of informal jobs and difficulties in defining levels of “informality”, operationally (e.g., informality in the main job, the secondary job or only some hours) this is really conceptually too (e.g. sector vs. job), there is also a wide range of direct and indirect social and health-related consequences of working under informal employment conditions (1,15,16). In many countries, concepts such as “informal sector”, “informal economy” or “informal employment” are often used interchangeably in spite to referring to social processes (17–19). Further complicating matters, “informal economy” or “informal employment” often have different meanings in low-, middle- and high-income countries, where informal employment may be defined differently depending on the occupation, location, employment contract or size of business in each zone (12,20,21).

The lack of official data in high-income countries makes it seem as if the problem is not present in these regions, while the economic data suggest otherwise. Several studies show that the informal economy in the OECD countries has been growing during the last decades, with a slight decrease in the early 2000 and increasing at the end of that decade, possibly due to the economic crisis that began in 2007 -2008 (22–24). The different labour markets regimes presents in high-income countries and the differences in social protection systems should also be taken into account, as labour market and employment policies are differential aspects of welfare regimes that have been shown to be related to health and health equity (25–27).

In times of economic crisis the informal economy is usually affected in similar ways as the formal economy, and both formal wage workers and informal wage workers face the loss of jobs and greater informalization of their employment contracts (28). On the other hand, households may resort to informal employment to ensure subsistence in situations of hardship or poverty. During downturns, informal wage workers are often the first to lose their

jobs. In the context of the current economic crisis, it is thus crucially important to analyse the dynamics of informal employment and how the crisis is affecting these patterns. Having good measures of this employment condition would help us to monitor it and obtain a registry with which to analyze and interpret behaviour related to informal employment in different situations, including economic crises. This in turn would enable us to design policies and policy evaluations.

The relationship between informal employment conditions and public-related health outcomes which may result in health inequalities are insufficiently studied, due to such impediments as the lack of official statistics, methodological problems such as the lack of accepted standard definitions, and the large heterogeneity of occupations, trades, employment arrangements, and health and safety hazards. Until now, most evidence comes from case studies conducted in middle and low-income countries (16,29–31) or surveys (15), which compare the health of formal and informal workers. Despite being the most prevalent method of understanding the situation of informal workers, over reliance on single case study methodology limits our understanding of the common experiences of informal work across the globe due to the different realities as well as welfare states present in high-income countries.

Previous studies show that informal workers have worse health than formal workers (32); some find that formal workers report significantly better mental health when compared to informal workers (15,16) and gender differences exist as well, women working in the informal sector have the poorest mental health compared to formal workers and male formal and informal workers (16). A relationship was also found between poor self-reported health and informal work (33). According to the conceptual framework of the WHO CSDH (34), different axes of inequality like gender, age, social class, or ethnicity determine the hierarchy

of power in society and the opportunities for good health. Therefore, take into account this axes of inequality could help us to understand health inequalities to try to prevent it.

One additional challenge of this body of work is the diverse terminology used to describe informal employment. Given the diversity of this issue and the many issues neglected, a scoping review was selected to assess the extent of the literature. This approach permits incorporating a range of study designs in both scholarly and grey literature and not focussing in the methodology of included studies. Therefore, our objectives for this scoping review are to:

1. Identify existing scholarly and grey literature related to informal employment in high-income countries.
2. Conceptually map the literature according to country or geographical zone, year of publication and type of literature.
3. Map the definitions and methods of measurement of informal employment in the literature in order to improve them, with the hope of contributing to a reduction in the impact of informal employment on health inequalities within and between countries around the world, especially in high-income countries.
4. Assess the adequacy of questions necessary to capture concepts related to the impact of informal employment on health in two of the European surveys.

2. Methods

To complete our objectives, we conducted a scoping review. Scoping reviews are exploratory projects that systematically map the literature available on a topic, identifying the key concepts, theories, sources of evidence, and gaps in the research (35,36). We divided our scoping review in four stages: searching, screening, scoping and summarising. Figure 1 summarises the flow of study selection.

Stage 1. Searching: Firstly, a scholarly literature review was conducted using four relevant social science and economics databases: ProQuest, Scopus, Web of knowledge and JSTOR. Search terms included combinations of the terms “informal employment”, “informal labour”, “informal sector”, “informal economy” and “shadow economy” with “definition”, “concept”, “theories” and “measurement”. No year limits were included in the search criteria. A grey literature review was also conducted using the same terms, including an examination of reports by Public and International Organizations (i.e.: OIT, WIEGO (Women in Informal Employment: Globalizing and Organizing), and the World Bank), books, working papers or other documents that are associated with informal employment. Finally, we also read articles and reviews related to the literature from a list of references of relevant key articles. The literature search was conducted between May and June 2013.

Stage 2. Screening: all titles and abstracts were reviewed and the following inclusion criteria were applied: (1) concern with informal employment, (2) focus on informal employment in high-income countries, especially in the EU and US, (3) written in Spanish or English, and (4) being empirical literature, i.e. articles that were not authors’ opinions or comments.

Stage 3. Scoping: of the articles finally selected, information on the definition and methods of measurement of informal employment and informal economy was extracted (Table 1).

Stage 4. Summarizing: a summary of scoping categories in all selected articles was realized (Table 2).

Apart from the scoping review, we also conducted a review of the European Working Condition Survey (EWCS) and the European Social Survey (ESS) in order to see which of the three elements (measurement of informal employment, health and social stratification)

(14) are included in these surveys and which are not to make recommendations for future inquiry into the impact of informal employment on health inequalities.

3. Results

Our searches yielded a total of 2,461 articles, which included 2,427 scholarly articles and 34 in the grey literature. This number was reduced to 1,832 after duplicates were removed. Upon reviewing the titles and abstracts from the search results and applying the inclusion criteria, we finally read 86 full-text articles and their scope information as well as we summarized the scoping categories of these 86 articles (Fig. 1).

3.1. General characteristics of reviewed articles

We found that the publication range was between 1976-2013, yet the majority of articles were published between 2000 and 2009 (n=50, 58.1%) (Table 2) and 21% were published between 2010 and 2013. Although all articles analyzed data from high-income countries, a third of them (n=27, 31.4%) were also focused on other types of countries like low- and middle-income countries to show the situation (23,37); a 17.4% were focused in different countries in the EU (22,24,38) and a 19.8% in one specific country of the EU (39–41) (Table 2). According to the source of literature, most of them were journal articles (41) (n=52, 60.5%) or reports (n=30, 34.9%) (20), and the type of literature varied, the most common being discussion (n=33, 38.4%) or review papers (n=21, 24.4%), most of them reviewed the evolution of the definition or different techniques for measuring using empirical articles (Table 2).

3.2. Informal employment definitions

Regarding the definition of informal employment, 42 articles (48.4%) explained the evolution of the concept over time (42,43), while a significant percentage of them (23.3%) did not define the term and simply measured without definition (they were quantitative articles) (41,38), and 14% used a self-definition different from the official (44) (Table 2). According to the ILO, the informal economy refers to “all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements” (13). The ILO defines informal employment (9% of the articles used it) as “all informal jobs, whether these are carried out in formal sector enterprises, informal sector enterprises or households” (13). The theoretical framework of informal employment mainly accepted by the ILO (45) explains it in two dimensions: one, the type of production unit, which is defined in terms of legal organization and other enterprise-related characteristics, consists of three categories referring to the informal sector; and another, the type of job, which is defined in terms of status in employment and other job-related characteristics, and is divided into five categories according to their formal and informal nature. The ILO’s theoretical framework summarizes the type of jobs that are considered informal work. The five statuses in the employment categories used in this framework (own-account workers, employers, contributing family workers, employees and members of producers' cooperatives) do not have the same meanings in high-income countries when compared to low- and middle-income countries. Thus, the lines between these categories were ambiguous. This makes it difficult to apply the same framework in the high-income countries than in low- or middle-income countries. We did not find any definition of informal employment to be used in the study of health inequalities usefully.

3.3. Terms describing informal employment.

The articles presented a wide spectrum of terms for describing informal employment. The most common terms used were “informal employment” (n=21, 24.4%), “informal economy” (n=18, 20.9%) and “informal sector” (n=17, 19.8%) (Table 2). The concept of informal employment is different in each country, depending mainly on the type of income in the country (46). Thus, in high-income countries the use of the term “non-standard employment” (8%) is used interchangeably or as a proxy for informal employment, although these two concepts are not identical (47,48). Informal employment is considered work that is not subject to legal, social or economic protection or regulation; however, non-standard employment refers to changes in employment relations over the “standard” full-time or permanent employment (47) due to labour market flexibility. Another term commonly used to refer to non-standard employment is precarious employment (49), due to some similarities. Other categories used with the concept of non-standard employment in high-income countries are “atypical forms of work” (i.e. part-time employment, temporary employment and self-employment) and “very atypical forms of work” (1%) (i.e. short fixed term, short part-time, zero hour/on call and no contract) (50). Some of these categories are in alignment when defining precarious employment: temporality, disempowerment, vulnerability, wages, rights and exercise rights (51). Non-standard employment may be associated in certain countries with reduced levels of social protection and regulation; therefore, while informal employment could be included in the category of non-standard employment, we cannot assume that most non-standard employment is in the informal economy or is informal employment. Most of the conceptualization of these terms is carried out from the point of view of the economy and how informalization affects it. It is much less often carried out from a public health perspective.

3.4. Informal employment methods of measurement

With respect to methods of measurement, one third of the articles (n=29, 33.7%) explained the different methods of measurement available (52,53), but another third (n= 28, 32.6%) did not measure it, but explained the concept (10) (Table 2). To date, relatively little empirical public health literature has operationalized measures of informal employment premised upon the conceptualisation of informalization as an employment condition and not as a part of the economy. In carrying out this scoping review, and to the best of our knowledge, we have found that studies that measure the informal economy or employment do not measure health or health inequalities, and studies that focus on health do not quantify informal employment. In addition, the vast majority of studies that focus on health in informal workers are not conducted in high-income countries, but in regions with different characteristics, usually low-and middle-income countries (15,16,33,54). The methods for measuring the informal economy and informal employment can be divided into indirect and direct methods. On the one hand, indirect methods (23.2%) are macroeconomic approximations used to estimate the size of the informal economy, based on assumptions and using macroeconomic indicators in addition to statistical models (38,42,55,56). These methods measure the percentage of the informal economy relative to the total economy or GDP. They do not provide any details on the type of informal employment or on the characteristics of the workers. These kinds of methods are more widely used in high-income countries, particularly the MIMIC (Multiple Indicators Multiple Causes) method (22). Looking at the results of different studies that used these indirect methods, we found different percentages of the informal economy for the same countries (7,23,39). Indirect methods always estimate the size of the informal economy without distinguishing statuses in employment, such that we cannot know which status in employment has more impact on informality or on other forms of employment (11).

On the other hand, direct methods include voluntary surveys (22.1%) and tax

auditing-based methods. There are different methods of data collection with different types of samples: household-based surveys with a labour force component, most notably labour force surveys (LFS); establishment-based surveys and censuses of production, and mixed surveys including modular and stand-alone approaches. The most useful method is the LFS because there is wide range of information about employment, demographic data, as well as health in some cases. For the low- and middle-income countries, the ILO has developed a typology of surveys and records to measure informal employment, but this has not been done for high-income countries (57). Few studies in these countries use surveys to estimate only informal employment (58,59) or use official European surveys for this purpose (60) but, in these studies, health is not included. In sum, one can basically assume that indirect methods measure the size of the informal economy and direct methods measure informal employment. In public health, with the aim of reducing health inequalities, the most useful methods for knowing different characteristics of employment and working conditions are surveys, along with qualitative research to complement the same information.

The majority of the articles (n=78, 79.1%) focused exclusively on informal employment, 10% also focused in other employment conditions (32) and, other 10% focused on informal employment policies (61) (Table 2). It is important to note that, with the addition of the categories “methods of measurement”, “definition” and “how the article describes”, the percentage was higher than 100%, since one article could refer to more than one category.

After reviewing the two European Surveys (EWCS and ESS) and using the same methodology as Unanue (14), we found that there were a lack of information with which to measure informal employment at different levels. There was only information about the main job and not about the secondary job. There is no information about the companies’ registration or self-employed registration. Health outcome indicators were only partially

covered because there are very few questions about health. With regards to social stratification, two reviewed surveys (EWCS and ESS) measured these variables completely.

4. Discussion

There are different definitions and theories that describe and explain informal employment. When defining informal employment, it is important to identify whether it occurs in low-, middle- or high-income countries, because the realities in these countries are too different to share a common definition or a common explanation. To the best of our knowledge, registers about informal employment using direct methods do not exist in high-income countries. After reviewing European surveys we conclude that they might be used for this purpose although they are not intended to measure informal employment. Yet informal employment is often under-reported because the European surveys only take the main job into account, and informal employment may be used as a secondary source of income. In this section we present some recommendations to improve surveys in order to measure informal employment and its impact on health and health inequalities.

4.1. Definition of the informal economy and informal employment: Analytic implications

We note that informal employment can be conceptualised and measured with reference to the level of informality, that is, whether informal employment is the main or secondary job, or if it is only partially informal. Examples of the latter include those who charge part of a wage or overtime "in black" or those who are insured for certain hours while the actual working hours are longer. These multiple levels are important because the scope of work informality is large in high-income countries and there is a common assumption in most studies that a job is either formal or informal, but cannot be both. However, one study that

evaluated the prevalence of hybrid “under-declared” employment in south-eastern Europe found that 16% of formal employees received on average 60% of their gross salary as an envelope wage (62). Another recent study found that one in 18 formal employees receives an envelope wage from their formal employer, amounting to 25% of their gross pay on average (63). Consequently, these categories could have different implications for health and it could be critical to study them separately.

In addition, analyses should also consider social stratification variables (age, gender, social class, ethnicity/race and migration status), social relations of stratification that modify the relation between informality and health, as possible axes of health inequalities within informal workers. For instance, some studies found that women are over-represented in informal employment relative to men (58–60), yet gender segmentation exists when we consider the different statuses in employment (18). Around the world, men tend to be over-represented in the employer or self-employed status with higher earnings and women tend to be over-represented in the domestic workers status with lower earnings. The shares of men and women in unpaid domestic work and employees in informal enterprises tend to vary across sectors and countries. As for migration status, there are different findings: some studies found that immigrants are over-represented in informal employment (60) while other studies find that they are under-represented (58,59). It is also known that the most deprived social classes and unskilled jobs are over represented in informality, especially among those whose main job is informal (60). The different statuses in employment should also be considered, because it is possible to have different behaviours and experience different levels of vulnerability according to these.

Thus, it is important to seek a common definition that can be used by public health researchers. Based on the Employment Conditions Network definition (32), and with the intention of measuring it through a survey in high-income countries, we define informal

employment as a non-regulated labour market situation which usually involves an informal agreement between the employee and the employer (that is, all employees without contracts or those who do not know if they have one), self-employed who are not registered as professionals and work alone, employers who have 5 or fewer employees and family workers working in a family business without a contract (Fig. 2). In order to classify the size of enterprises but we do not have information about registration, the cut-off of 5 or fewer employees is one of the most used criteria. On the other hand, professionals are more likely to work legally with some kind of authorization and pay taxes from at least some part of their income (64).

4.2. Measurement of informal economy and informal employment: direct and indirect methods

The main methods for measuring informal employment are direct and indirect methods. On the one hand, it is impossible to measure informal employment according to the definition that we have proposed using indirect methods. However, with indirect methods, one can also capture other forms of informal employment, such as secondary jobs and under-declared work (envelope wages), yet they cannot be identified separately for methodological reasons. On the other hand, direct methods such as surveys can capture more information about workers and firms in order to estimate informal employment and know employee characteristics including the economic status of the individual (employee, self-employment, employer or family worker), whether or not a contract is in place (in the case of employees and family workers), or socioeconomic characteristics, as well as the impact of informal employment on health inequalities, assuming the survey has a variety of questions about health. Beyond surveys, on certain occasions it would be necessary to complement them with qualitative methods due to the nature of informal employment. Unfortunately, survey

methods also have limitations and have been criticized. First, surveys are generally not created to analyse informal employment and usually only ask about the respondent's main job. In many countries, especially in high-income countries, informal employment primarily occurs in secondary jobs or in partially irregular jobs (those that do not fully contribute to social security or do so incorrectly), so the scope of informal employment is underestimated (62). Thus, it would also prove beneficial for surveys to introduce questions about secondary jobs (e.g. if the respondent has any other job besides the main, the type of contract for the secondary job, the number of hours worked, etc.) and investigate the main task in greater detail, if you qualify for benefits (paid vacation, sick leave), hours of employment and hours worked). And second, participants' responses are sensitive to how the questionnaire is designed and worded, and whether or not respondents want to collaborate (42,65).

4.3. Conclusion

The current labour market circumstances are such that labour force transitions are frequent and workers pass, for example, from precarious employment to unemployment and informal employment. Informal employment is an employment condition that is also present in high-income countries. Therefore, public health research must improve monitoring and analysis of informal employment in order to know the impacts of this employment condition on health inequalities (66). A unification of informal employment definitions to be used in high-income countries, distinct from the concept of non-standard employment, is necessary in order to make comparisons between countries or over time, for example. In addition, developing consistent and broadly comparable measures of informal employment and the health of informally employed workers stratified by important social indicators into data sets is essential to protecting these workers. Development and surveillance of these measures could generate evidence that shows how the health of informal employed is being affected by

their employment conditions. Precise definitions, measures and registers make prioritizing and making policy decisions to improve their health and reduce health inequalities easier and more effective.

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* Included in the scoping review.

Table 1. Information extracted from 86 included articles during the scoping stage

Description of scoping categories
<p>Publication year The year of publication for journals or reports and year of last update for other electronic materials</p>
<p>Country Focus In which country or geographical zones were focused</p>
<p>Source of literature Which kind of source of literature is: journal, book, report, grey literature, other</p>
<p>Type of literature What type of literature is: review, quantitative, qualitative, discussion paper, other</p>
<p>IE definition What definition were mentioned: ILOs definition, self-definition, country definition, evolution of definition along time</p>
<p>Terminology used to refer to IE What terminology is used to refer to IE: informal employment, informal economy, non-standard employment, very atypical employment, other</p>
<p>How the articles describes What methods of measurement were mentioned: indirect methods, direct methods, explain different methods</p>
<p>IE focus Publication is focused on IE mainly or is focused on different employment conditions</p>

Table 2. Results of information extracted from the 86 included references.

Coding categories	n	%
Years		
1970-1979	4	4.6
1980-1989	5	5.8
1990-1999	9	10.5
2000-2009	50	58.1
2010-2013	18	20.9
Countries Focus		
Advanced economies	7	8.1
All world	27	31.4
European Union	15	17.4
Specific countries of EU *	17	19.8
Regions of Spain	5	5.8
United States	2	2.3
Not mentioned	13	15.1
Source of literature		
Journal	52	60.5
Book	3	3.5
Report	30	34.9
Others	1	1.2
Type of literature		
Book	3	3.5
Discussion paper	33	38.4
Quantitative	16	18.6
Review	21	24.4
Working paper	11	12.8
Others	2	2.3
IE definition**		
ILO definition	8	9.3
Self-definition	12	13.9
Evolution of definition	42	48.8
European Commission	5	5.8
definition		
Others definitions	5	5.8
Not defined	20	23.3
How the article describes**		
Informal sector	17	19.8
Informal economy	18	20.9
Shadow economy	12	13.9
Underground economy	7	8.1
Hidden economy	3	3.5
Black economy	2	2.3
Informal employment	21	24.4
Non-standard employment	7	8.1
Very atypical employment	1	1.2
Undeclared employment	2	2.3

Undeclared work	10	11.6
Methods of measurement**		
Calculate energetic consumed (IM)	2	2.3
Calculate MIMIC meth (IM)	8	9.3
Calculate monetary meth (IM)	5	5.8
Indirect methods (IM)	5	5.8
Survey methods	19	22.1
Explain different methods	29	33.7
Not measured	28	32.6
IE focus		
Only in IE	68	79.1
Other employment conditions	9	10.5
IE policy	9	10.5
Total	86	100

Note: * Countries included: Spain, Italy, United Kingdom, Romania, Bosnia, France, Greece, Germany, Scandinavian, Czech and Slovak Republics. ** One article could refer more than one. IM= Indirect methods

Fig. 1. Flow of study selection across the three stages of the scoping review process.

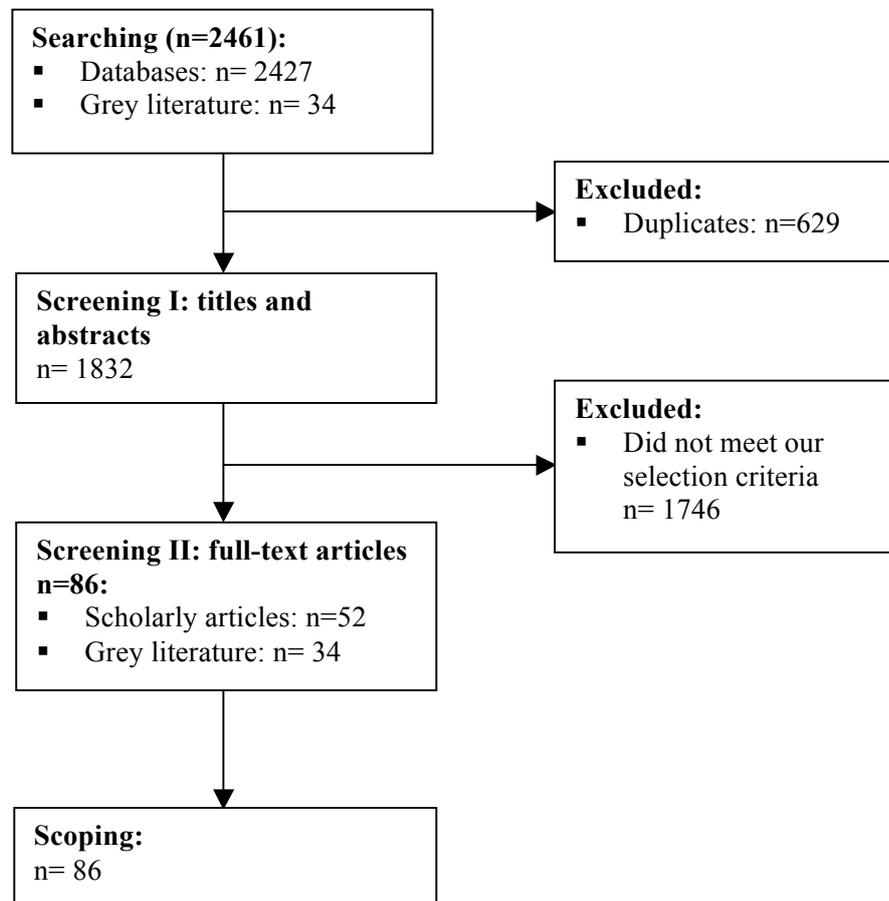
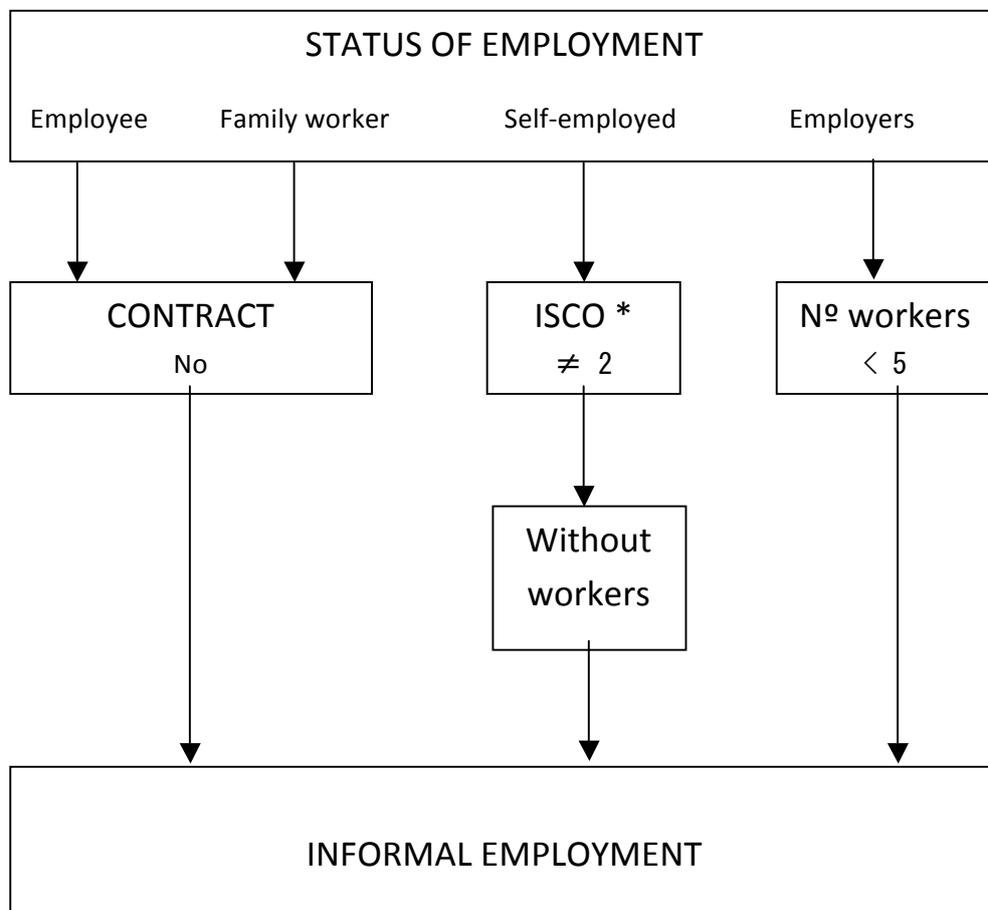


Fig. 2. Scheme to identify informal employment, based on our definition.



* ISCO (International Standard Classification of Occupations) 2 = Professionals.